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[364-ம் பக்கத்திலுள்ள அடிக்குறிப்பைக் காண்க]

Note on Agriculture Demands 1975-76

I place before you a brief note highlighting various Agricultural production Programmes.

AGRICULTURAL PRODUCTION.

The anticipated actual production in 1974-75 is 51.30 lakh tonnes of foodgrains, 9.36 lakh tonnes of oilseeds, 2.69 lakh tonnes of cotton (bales) and 11.88 lakh tonnes of gur. Total production in 1974-75 i.e., 75.23 lakh metric tonnes represents 26.30 per cent decrease when compared to production of 102.08 lakh metric tonnes achieved in 1973-74. Corresponding anticipated production for 1975-76 will be 80.60 lakh tonnes of foodgrains, 12.74 lakh tonnes of oilseeds, 4.30 lakh tonnes of cotton (bales) and 11.80 lakh tonnes of gur. There was a fall in the area of production during 1974-75 which is ascribable to the belated rainfall and unprecedented and unfavourable weather conditions and consequent poor storage position in the reservoirs, tanks and wells. The decline in production is due partly to reduction in area and partly to fall in productivity on account of withering of crops consequent on insufficient water-supply, mainly as a result of failure of North-East monsoon in several parts of the State.

The anticipated achievements under High Yielding Varieties Programme during 1974-75 are 46.79 lakh acres under High Yielding Variety of paddy and 10.97 lakh acres under Hybrid Millets. During 1975-76, it is envisaged to stabilise 9.70 lakh acres under Hybrid and High Yielding Millets.

SEASONAL CONDITIONS.

The rainfall in the summer months from March 1974 to May 1974 was below normal in all the districts of Tamil Nadu. As against the normal rainfall of 137.8 mm during the hot weather period, a rainfall of 94.2 mm was recorded for the entire State. The failure of this rain badly affected millets and oilseeds in the districts of Chingleput, South Arcot, North Arcot, Coimbatore and Tiruchirappalli.

The South-West monsoon started late in the season and though a rainfall of 325.8 mm was recorded as against the normal of 307.3 mm, the rainfall was ill-distributed paving way for a bad crop season.

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A rainfall of 105.6 mm was recorded as against the normal of 186.0 mm during October 1974. There was practically no rain during November and December, when normally the North-East monsoon should be in full swing. A rainfall of 157.8 mm was recorded as against the normal of 449.7 mm during the months from October to December 1974. The dry crops raised during the South-West monsoon, could not get the benefit of the North-East monsoon, during their growth period, due to the complete failure of North-East monsoon resulting in withering of crops in many parts of the State. Most of the tanks and irrigation sources did not get enough water-supply and the crops raised with these water sources were also badly affected. The sowing of cotton in black cotton soil area in Tirunelveli could not be taken up due to the failure of North-East monsoon.

Severe drought condition is prevailing in the districts of Ramanathapuram, Pudukkottai, Tirunelveli, Madurai, Coimbatore and parts of other districts. The normal area under Navarai paddy in Chingleput, North Arcot and South Arcot districts has been affected due to the poor storage of water in tanks and wells.

Due to unprecedented failure of both monsoons resulting in a serious set back in cultivation both dry crops as well as irrigated crops have been adversely affected. The level of production anticipated during 1974-75 may not be achieved in full.

PULSES.

During 1974-75, it is proposed to cover an extent of 6.36 lakh hectares under pulses as against 6.96 lakh hectares in 1973-74. A production of 1.46 lakh tonnes is estimated in 1974-75 as against 2.19 lakh tonnes in 1973-74. Generally, shortfall of coverage in area and production is expected due to the unprecedented unfavourable weather conditions. However, in order to boost the production of pulses, it is proposed to persuade the farmers to adopt package of practices, and to conduct 1,000 demonstrations with improved strain of pulses. To ensure a steady flow of primary and secondary seeds, 15,000 acres are proposed to be run as seed Farms in 1975-76 also.

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INTENSIVE AGRICULTURAL DISTRICT PROGRAMME, THANJAVUR.

As a result of the Intensive Agricultural District Programme activities, the high yielding varieties have spread to nearly 92 per cent of the area in the delta. The consumption of fertilisers and plant protection chemicals has increased considerably as seen from the figures given below:—

UNIT IN METRIC TONNES.

<i>Year.</i>	<i>Ammonium Sulphate.</i>	<i>Super Phosphate.</i>	<i>Muriate of Potash.</i>	<i>Quantity of pesticides.</i>
(1)	(2)	(3)	(4)	(5)
1969-70	1,05,028	73,236	4,965	8,111
1970-71	1,19,755	83,400	9,381	10,050
1971-72	1,37,715	98,075	13,585	12,143
1972-73	1,54,316	99,202	14,186	13,305
1973-74	1,63,765	93,406	15,268	10,595

There is a significant change in the outlook of the farming community.

It is programmed to cover under paddy 15.30 lakh acres in Thanjavur and 1.20 lakh acres in two Intensive Agricultural District Programme Blocks transferred to Pudukkottai district. The following measures will help to achieve the target.

(i) Under Adaptive Research trials, different strains of paddy will be tried in about 125 locations, to find out the high yielding strains suited to Kuruvai, Samba and Thaladi seasons.

(ii) Three acre three crop sequence demonstrations will be conducted in 140 locations with a view to popularise best high yielding strains selected from the Adaptive Research trials among the farmers and to increase production in the shortest period.

(iii) To achieve these targets, necessary supply of inputs, technical advice, plant protection chemicals, and credit facilities will be taken up during the year 1975-76.

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(iv) The Information Unit and Farmers Training Centre Aduthurai will arrange propaganda and publicity through posters, pamphlets and radio to communicate the production techniques to the farmers of the district.

INTENSIVE AGRICULTURAL AREA PROGRAMME.

The main objective of the programme is to intensify production of cereals through economic dosage of fertilizers, green manuring, improved seeds, plant protection methods and agricultural management practices.

The Intensive Agricultural Area Programme is now implemented in eight districts, viz., Chingleput, Tiruchirappalli, Coimbatore, Madurai, Tirunelveli, Pudukkottai, North Arcot and South Arcot districts. The crops covered under this programme are paddy, cholan, cumbu, ragi, cotton and groundnut. It has been proposed to extend the programme during 1975-76 to Ramanathapuram, Dharmapuri, Salem and Kanyakumari districts, thus covering the entire State.

STATE SEED FARMS.

There are 52 State Seed Farms including one large sized farm at Anna Pannai, Kudumiamalai in Pudukkottai district covering an area of 5,135.73 acres, of which 4,001.50 acres are cultivable. An additional extent of 407 acres has been requisitioned under the provisions of the Tamil Nadu Requisitioning and Acquisition of Immovable Property Act, 1956, out of 524.16 acres proposed for expansion of the State Seed Farm, Navlock in North Arcot district.

The State Seed Farms are running on profit on the whole. It is proposed to equip all the farms with improved machineries like thresher, seed cleaner and other equipments like moisture meter, etc.

TAMIL NADU STATE FARMS CORPORATION

With the object of bringing under cultivation extensive areas of cultivable lands, estimated at 11 lakh acres, lying waste at present, the Government have set up the Tamil Nadu State Farms Corporation. The Corporation will establish modern farms and adopt improved techniques. To start with, the Corporation has taken on lease about 1,520 acres at a rent of Rs.50 per acre per annum, in Theruvoy and Karadipudur villages in Gummidipoondi taluk of Chingleput district. Each

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Farm will be of about 100 hectares in area, and will be managed by a Deputy Agricultural Officer. The work relating to sinking of tube-wells in the farms is in progress. The development of the lands and the farming operations will provide employment to the rural population in the neighbourhood.

According to 1974 statistics, apart from the cultivable waste, Tamil Nadu has also lands classified as "fallow" to the extent of 14,38,000 hectares. The Government will make a steady and sustained effort to bring under cultivation as much of these fallow lands as possible, by applying the Land Utilisation Order, 1961.

SEED CERTIFICATION.

The Seed Certification Agency in this State, which functions under the control of the Director of Agriculture consists of one Seed Certification Officer with headquarters at Tiruchirappalli assisted by two assistant Seed Certification Officers with headquarters at Tiruchirappalli and Coimbatore with complementary staff. During 1974-75, one more Assistant Seed Certification Officer with headquarters at Madurai has been sanctioned.

The target and achievements under the seed Certification Scheme during 1974-75 are as follows:—

(1)	Targetted area		Area covered	Target
	(acres)		upto 31st January 1975	for 1975-76
(2)	(3)	(4)		
Paddy	8,500	7,196	9,000	
Cotton	1,500	1,524	1,700	
Hybrid millet	1,800	1,714	1,900	

Seed certification and Seed testing will continue to be done by the Department. Seeds are tested at the Seed Testing Laboratories at Coimbatore and Madurai for their quality and purity and distributed through the Agricultural Depots.

It is proposed to establish two more seed processing units at Coimbatore and Tirunelveli.

The number of samples tested during 1974-75 is 20,000

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TAMIL NADU AGRICULTURAL PRODUCTIVITY COUNCIL

The Tamil Nadu Agricultural Productivity Council has been registered under the Societies Registration Act. The Governing Body of the Agricultural Productivity Council has also been constituted. A number of study projects on a variety of subjects, concerned with agricultural production are undertaken by the Council. These activities will be enlarged during the coming years.

CHEMICAL FERTILISERS.

Our strategy to increase agricultural production mainly hinges on proper use of fertilisers. Our State is one of the leading States which has been consistently consuming higher quantities of balanced fertilisers. For the current year, we requested the Government of India to supply 3.25 lakhs M.T. of fertilisers. Though the Government of India promised to supply 2.56 lakhs M.T. tonnes of fertilisers; we could get only 1.61 lakhs M.T. tonnes of fertilisers due to various reasons beyond our control. But care was taken to ensure that fertilisers were distributed to the farmers equitably according to the crop requirements by introducing a card system and organising an effective force to check illicit movement of or trading in fertilisers. To enthuse the farmers to use fertilisers judiciously; fertiliser trials and crop response studies were undertaken on a large scale. To supplement the available inorganic nutrients, the laboratories of the State Department of Agriculture produced and distributed 1.68 lakhs of Rhizobial culture flasks. To analyse the micronutrient status of the soils, four of our laboratories were strengthened with adequate equipments for undertaking testing of elements like zinc, copper, etc.

Government of India have been already informed of our requirements of 3.50 lakhs M.T. of Nitrogenous fertilisers for 1975-76. It has been indicated during the last Zonal Conference held at Bangalore that the supply position is expected to ease in future. Every effort will be taken to get the maximum quantity of fertilisers and make them available in time to the farmers.

The scheme for distribution of chemical fertilisers is being implemented by the State. Pool fertilisers received from the Government of India are distributed through Co-operative Societies and nonpool fertilisers produced by indigenous manufacturers through both the Co-operative and the private agencies. There has been shortage of pool and non-pool fertilisers

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during the current year owing to world wide shortage and mechanical failure, etc. The following is the target; as fixed by us and the achievement for 1973-74 and 1974-75 respectively.

Year	Target lakh M.T.			Achievement lakh M.T.		
	N.	P.	K.	N.	P.	K.
1973-74	3.17	1.00	0.98	1.95	0.70	0.73
1974-75	3.35	1.00	1.00	1.61	0.44	0.53

During the year 1975-76 it has been programmed to distribute 3.50 lakhs M.T. of N., 1.25 lakhs M.T. of P. and 1.25 lakhs M.T. of K.

Fertiliser samples from various distributing points are taken and analysed in the two fertiliser testing laboratories at Coimbatore and Madurai to prevent the manufacture and distribution of spurious fertilisers in the market. There are about 10,000 sale points in our State and each laboratory is analysing 1,800 samples per year. The number of samples analysed and number of sub-standard samples detected are tabulated below.—

Year.	Total number of Samples analysed.	Total number of sub-standard samples found.
1973-74	4,033	626
1974-75 (Up to January 1975.)	4,408	444

During the year 1975-76 it has been tentatively decided to analyse 3,600 numbers of samples.

Punishments like cancellation of certificates of registration, suspension of certificate of registration are being awarded based on the merits of the cases. Legal action is also taken wherever it is warranted.

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For the year 1974-75; the quantities promised by and the actual receipt from indigenous manufacturer are as follows.—

*M.T. of nitrogeous
fertilisers.*

Neyveli Lignite Corporation Ltd	25,350	12,945
Madras Fertilisers Ltd	67,912	38,929
F.A.C.T.	40,555	19,819
E.I.D. Parry	6,333	5,550
Zuari Agro Chemicals Ltd., Goa	4,800	4,802
Coromandal Fertilisers Ltd., Vishakapatnam..	1,022	858
S.P.I.C. Ltd., ...	27,600	..
Total ..	1,73,572	82,903

FERTILISER FUND.

The Government have passed orders constituting a Fund known as the Fertiliser Fund to which the surplus monies, if any derived from fertiliser dealings, and the interest thereon are credited. The funds so formed are to be utilised for the following purposes :—

(a) Production of enriched organic manures and pesticides for distribution to farmers.

(b) Development of mechanical compost in urban areas for the use of cultivators ;

(c) Production of fertilisers in Mini Fertiliser plants to make good the shortfall in the supply of fertilisers needed by the farmers; and

(d) For increasing agricultural production in general of the farms in the State.

URBAN COMPOST.

The Government of Tamil Nadu will be taking special steps to improve the availability of green manure and organic manures so as to partially supplement the deficit in the total requirement of nitrogeous fertilisers. The Corporation of Madras has come forward

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to install a mechanical compost plant at a cost of Rs. 61.75 lakhs. It is proposed to move the Government of India to sanction grant-in aid at the rate of 33 per cent of the capital cost. The Corporation of Madurai has resolved not to install a mechanical compost plant due to difficult financial position.

GREEN MANURING SCHEME.

The object of the scheme is to augment the organic matter content of the soil by application of green manures or green leaf manures for increasing food production. On account of its rich manurial content, green manure is effective in maintaining the productivity of the soil. During the year 1974-75 the scheme has been taken over by the department from the Panchayat Unions.

During 1974-75 it is proposed to procure 2,350 metric tonnes of green manure seeds at a cost of Rs. 20.12 lakhs for distribution to cover an area of 3.50 lakh acres.

During 1975-76 it is proposed to procure 2,400 metric tonnes of green manure seeds for distribution to cover an area of 3.60 lakh acres

COMPREHENSIVE SCHEME FOR EXTENSION AND SEED MULTIPLICATION OF TAPIOCA IN TAMIL NADU.

In Tamil Nadu, tapioca is now cultivated in about 109,000 acre^s and under proper management tapioca yields 8 to 10 tonnes per acre. With the newly evolved high yielding hybrid varieties, the yield of tapioca can be increased still further. The Tapioca Research Station, Salem has evolved the high yielding varieties like H 97, H 165 and H 226.

During 1975-76 a total additional area of 100,000 acres will be covered in all the districts in Tamil Nadu. It has been decided to start three Seed Multiplication Centres in three places in Tamil Nadu consisting of 100 acres each.

PLANT PROTECTION.

During the years 1971-72, 1972-73 and 1973-74, quantities of plant protection chemicals distributed to ryots and their value are given below:—

	1971-72	Value Rs. in lakhs.	1972-73.	Value Rs. in lakhs.	1973-74.	Value Rs. in lakhs.
Dust in M.T.	30,788	368.50	21,347	503.72	13,606	490.94
Liquid in litres.	1,057,584		1,081,014		1,019,814	

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The major activity of the department under this programme is the supply of quality pesticides to ryots at reasonable prices. The plant protection chemicals offered for sale are first thoroughly tested both chemically and biologically and approval is given only when these are found effective.

These chemicals are purchased by the Director of Agriculture through open tender system and distributed to all the agricultural depots in the State.

Of late increase in the price of pesticides and scarcity in their availability have been noticed. To check these trends, the Government have since introduced a new arrangement requiring pesticides manufacturing firms to supply 50 per cent of the technical grade pesticides indigenously produced in respect of ten items to the formulators nominated by the Government. The formulators are required to supply the entire formulated materials to the department at the rates fixed by the department. This system ensures availability of pesticides to the ryots at reasonable prices. During the current year an amount of Rs. 600 lakhs has been earmarked for purchase and distribution of pesticides to ryots. During 1975-76, it is proposed to purchase pesticides worth Rs. 650 lakhs.

Quality control.—To ensure that only quality chemicals are distributed to the depots, samples of pesticides received at the depots are analysed in the Pesticides Testing Laboratories at Coimbatore, Aduthurai, Kanchipuram, Kovilpatti, Madurai, Salem and Tiruchi. In the case of supplies being found substandard the suppliers are penalised. Samples of pesticides sold by private dealers are also taken for analysis under the Insecticides Act to ensure supply of quality pesticides by the private sector. During the current year, 7312 samples have been tested up to November 1974, out of which 104 samples have been found substandard.

Supply of Plant Protection equipments.—The department maintains stock of plant protection equipments for hiring out to farmers to facilitate them to undertake plant protection measures effectively. The equipments are also distributed to individual farmers and the panchayats and Panchayat Unions at a subsidised cost under the agricultural grant of Rural Development and Local Administration Department.

To enable the individual ryots and organisations like Panchayats and Panchayat Unions to have the sprayers and dusters in a proper working condition, the department maintains six mobile servicing squads to repair and service them. During the current year, one more unit will be set up for this purpose. The programme of the visit of

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the Mobile Servicing Units is prepared in advance every month and sent to block centres so as to enable the ryots and other organisations to avail themselves of the service of the units. Up to 30th November 1974, 3,532 equipments have been repaired and serviced at a total cost of Rs. 1.30 lakhs.

Ground Spraying Programme.—In areas where pests and diseases are noticed in an endemic form the Government themselves undertake spraying of pesticides in the ryots lands through local entrepreneurs meeting the expenditure initially from State funds and recovering them from the beneficiaries later on. During the current year, it has been programmed to spray an area of 2,35,900 acres in respect of paddy, groundnut and pulses in the entire State. Under the programme, a subsid of Rs. 3 per acre is made available to the ryots, and the balance of expenditure is recovered from them.

MINOR IRRIGATION.

Under the Minor Irrigation Programme, the Department is hiring out to the farmers at concessional rates various types of machinery for sinking tubewells and filter points or for deepening of existing wells. The details of different types of machinery available with the Department are given below:

Percussion Drills		52
Rotary Drills		50
Calyx Drills		20
Hammer Drills		11
Hand Boring Sets		460
Rock Blasting Units		157
Air Compressors		8
Long Hole Equipments		31
Debris Removers		45

To strengthen the existing fleet of machinery it is proposed to purchase during 1974-75, 2 wagon drills, 30 rock blasting units, 10 long hole equipments and 30 debris removers. During 1975-76, it is programmed to purchase 3 wagon drills, 6 rock blasting units, 6 long hole equipments, and 35 tents and to construct one servicing shed.

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For the speedy execution of relief works in the drought affected areas, 50 per cent of the equipments available with the department has been specially diverted for sinking new drinking water wells and for deepening existing wells. In addition, the Government of India have also been moved to sanction foreign exchange, import licence and clearance certificate for the import of 30 Russian drilling rigs. Their reply is awaited.

Details regarding the total number of wells sunk by the Department so far (up to January 1975) from the inception of the Scheme and the programme for 1975-76 are furnished below :—

	Number of different types of wells so far sunk up to January 1975.	Physical target for 1975-76.
(i) Private tube-wells	22,879	2,500
(ii) Filter-points	26,576	2,000
(iii) Boring in wells	6,632	800
(iv) Deepening of wells	10,236	1,800

SUGARCANE RESEARCH AND DEVELOPMENT SCHEME INCLUDING PACKAGE SCHEME.

The object of the scheme is to increase the yield per hectare of sugarcane by adopting improved agronomic practices and laying of demonstration plots and to step up production. The Sugarcane Development Scheme is being executed by a Deputy Director of Agriculture (Sugarcane Development) at State level and is being supervised by four District Agricultural Officers (Cane Development) at regional level. The position of the Sugarcane Development Scheme at present is as follows :—

There are at present 47 Development Centres with a staff of one Deputy Agricultural Officer (Sugarcane), one Agricultural Assistant and four Demonstration Assistants for each centre covering an area

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of 4,000 acres. The work in the Development Centre is mostly propaganda and laying out of demonstration plots for bringing home the advantage of improved cultivation.

Package Units.—There are at present 8 package units around 8 sugar factory areas with a staff of two Deputy Agricultural Officers (Sugarcane), two Agricultural Assistants and six Demonstration Assistants for each unit covering an area of 4,000 acres. The object of the Scheme is to intensify the cultivation measures in a compact area of 4,000 acres round about each sugar factory area by adoption of package of practices and step up acre yield by one tonne per acre every year. The ultimate object is to intensify production in the existing area and to expand the area under sugarcane where new Sugar Mills are proposed to be set up.

Parasite Units.—There are at present 12 Parasite Breeding Centres for sugarcane including one borer station functioning at Chingleput having a staff of one Deputy Agricultural Officer and one Agricultural Assistant. The remaining 11 stations are having a staff of two Deputy Agricultural Officers and eleven Agricultural Assistants in total. The object of the Scheme is to breed the parasites in the laboratory and to release them to control sugarcane borer pests in ryots' fields.

During 1974-75, the first year of the Fifth Five-Year Plan, it is programmed to have an additional coverage of area by another 20,000 acres over the existing level of 3.00 lakh acres so that the production in terms of gur may be maintained at 11.20 lakh tonnes. The per acre yield for 1974-75 would be at the level of 35 Metric Tonnes of sugarcane.

Necessary proposals have already been sent to Government of India for the Centrally Sponsored Scheme for the development of sugarcane and sugarbeet at a cost of Rs. 83.21 lakhs during the Fifth-Five Year Plan period and their concurrence is awaited.

SGIL CGNSERVATION

The main objective of the Soil Conservation Scheme is to conserve soil and adequate moisture required for the crop growth by proposing suitable and appropriate erosion control measures both in the plains and hilly areas. In heavy rainfall and in rolling terrains like Nilgiris,

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the soil conservation measures include provision for safe disposal of excess water through properly designed outlets. The land improvement measures include the following types of work :—

1. *On plains—*

- (a) Contour bunding.
- (b) Land levelling.
- (c) Water management.

2. *On Hills—*

- (a) Contour stonewall.
- (b) Bench terracing.
- (c) Contour or Staggered trenching.

The above soil conservation measures are executed mainly during the non-agricultural seasons engaging local manual labourers. These schemes are the potential sources for providing employment to the bulk of the agricultural labourers during the idle period. Soil and water conservation works, in the process of checking erosion of soil by water, allow water-spread against every terrace or bunded structure. This water percolates through the soil profile and helps recharging of underground water. As a result the general water table and water level in the wells in and around the area is increased. Soil conservation works are executed as a watershed or sub-watershed basis, covering all types of lands.

Soil conservation work in the command area of major irrigation has been initiated in the Cauvery delta of Thanjavur district involving land levelling, grading, irrigation and drainage channels, renewal or repairs to field bunds, etc. The work has now been extended to the Command Area of Sathanur Reservoir Project in North Arcot district. An area of 14-10 lakh acres in both plains and hills put together has been covered so far. It is proposed to cover an area of 1-16 lakh acres during 1975-76. The average cost of soil conservation works per acre in plains works out to Rs. 90 to 100 and that in hilly area Rs. 900 to 1,000. The total cost of this scheme is recovered from the beneficiaries after allowing a subsidy of 25 per cent in the plains and 40 per cent in the hills and the balance is recovered in 10 equated annual instalments starting from the third year after the completion of works. No interest is charged for the first two years. It is estimated that an additional production of half a tonne of rice per acre can be achieved due to soil and water management works in plains and about 27 per cent additional production in potato can be achieved in hill areas. With such increase in the net farm income due to additional

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crop yield obtained every year, the farmer can repay the annual instalments towards the cost of works and also have a good portion of the net farm income to improve his economic status.

COTTON DEVELOPMENT.

The present production of Cotton in Tamil Nadu is 3.41 lakh bales of lint of 180 kg. each as against the requirements of about, 11 lakh bales of lint annually. In spite of the departmental efforts to maximise the cotton production during the past two years, the total yield as well as area had dwindled during the past two years. This is mainly due to unforeseen climatic conditions, inadequate marketing facilities, besides unfavourable prices for cotton kapas at the time of harvest. However the per acre yield in respect of cotton has steadily increased in all package areas. With a view to step up the production of cotton, the following schemes are being implemented in the State :—

(1) *The Intensive Cotton Development Programme.*—It is a Centrally Sponsored Scheme and is being implemented in the districts of Coimbatore and Tirunelveli since 1971. An area of 2,00,000 acres of irrigated cotton in Coimbatore district and an area of 1,18,000 acres of rainfed cotton are covered in Tirunelveli district. Subsidy is available for demonstration plots and plant protection equipments. The scheme will be continued and extended further to an additional area of 50,000 acres under rainfed lands and to an additional area of 12,000 acres under irrigation lands, subject to funds becoming available from the Government of India during 1975-76.

(2) *The Cotton Package Programme.*—It is being implemented in Srivilliputhur, Salem, Periyakulam, Tiruchirappalli, Sivakasi and Thirumangalam package areas. Under the scheme credit facilities are given to cotton growers by the Co-operative Societies based on the farm plans. Subsidy is given by the Government for demonstration plots.

(3) *The Co-ordinated Cotton Development Scheme.*—It aims at improving cotton production in the existing irrigated and rainfed cotton areas as well as the newly reclaimed areas under various new irrigation projects by adoption of improved cultivation practices. Under this scheme, subsidy is being given by the Government for demonstration plots. Inter-cropping of cotton with onion, groundnut and pulses during summer season will be popularised in all districts during 1975-76 in an intensified manner.

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Crop Cutting Experiments, Adaptive Research Trials, Demonstration and other Agronomic Trials will be carried out by extension staff to educate the farmers in the adoption of package of practices during 1975-76 in a systematic manner.

The schemes proposed during 1975-76 are estimated to produce a total yield of 4.3 lakh bales of lint over an area of 3.70 lakh acres.

OILSEEDS DEVELOPMENT SCHEMES

Oilseeds occupy an important position in the agricultural economy of the State.

During the second year of the Fifth Five-Year Plan in 1975-76 an additional area of 2.31 lakh acres with an additional production of 1.24 lakh tonnes are proposed to be achieved bringing the total area and production as follows :—

Crop.				Area in lakh acres.	Production in lakh tonnes.
1.	Groundnut	..	..	24.00	11.28
2.	Sunflower	..	..	3.75	1.01
3.	Gingelly	..	..	3.22	0.41
4.	Castor	..	..	0.29	0.04
Total ..				31.26	12.74

With a view to achieve the above objectives, the following existing Oilseeds Development Schemes will be continued during the second year of the Plan in 1975-76.

1. Intensive Oilseeds Development Programme—Central Sector.
2. Sunflower Development Scheme—Central Sector.
3. Package Scheme on Oilseeds—State Sector.

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1. Intensive Oilseeds Development Programme—Central Sector.—The object of the scheme is to increase the production of oilseeds in potential areas in the districts of North Arcot and South Arcot to cover 75 per cent of the area under oilseeds under this programme.

During 1975-76 an extent of one lakh hectares will be covered under new strategy of diagnostic work by (a) ensuring adequate supply of inputs, (b) making available the inputs in time to the farmers, (c) organising plant protection measures on a campaign basis, (d) laying out problem oriented demonstration plots, (e) providing technical advice and service and (f) popularising a suitable cropping pattern to increase the area.

Under general extension improved package of practices popularised under Groundnut Export Oriented Programme will be continued in 1.50 lakh hectares to sustain the benefits accrued already.

During 1975-76 seeds will be procured from the organised seed farms and distributed. Problem oriented demonstrations—1,000 numbers in all at one hectare plot per 100 ha. will be laid providing an assistance of Rs. 125 per hectare.

2. Sunflower Development Scheme—Central Sector.—The object of the scheme is to increase the area under the newly introduced crop in a phased manner, aiming at the production of 1.01 lakh tonnes to supplement the demand for edible oil and to arrest its spiralling price.

During the year 1975-76 it is programmed to bring 1.50 lakh hectares under sunflower crop of which 50 per cent, i. e., 0.75 lakh hectare will be covered departmentally with processed quality seeds. The quantity of 937 tonnes of sunflower seeds will be distributed. Demonstration Plots will be laid in 750 hectares of one hectare each with a subsidy of Rs. 300 per hectare to acquaint the farmers with scientific methods. Besides it is proposed to organise seed farms within an area of 1,500 hectares (including 750 hectares of land on which demonstration plots proposed are to be laid). The short duration high yielding and high oil containing variety will be multiplied in these plots.

3. Package Scheme on Oilseeds—State Sector.—The object of the scheme is to increase the production of oilseeds by applying modern production technology in the major oilseeds growing district.

An area of 2.80 lakh hectares will be covered, in all the districts except South Arcot and North Arcot, through 14 package and 3 sunflower units.

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To maintain the purity and quality of seeds, seed farms will be organised at various stages and improved seeds multiplied there will be procured and distributed.

It is proposed to cover 5,000 hectares under castor in 1975-76 by multiplication of SA. 1 and SA. 2 varieties. Five hundred bags will be procured from the seed farms of 1,000 acres run by the department. During 1974-75 seed farms will be organised in 400 acres and a quantity of 200 bags of gingelly seeds will be procured and distributed to cover 800 acres. Loan facilities will be arranged to the cultivators through Institutional Finance and Co-operatives.

COCONUT DEVELOPMENT SCHEMES IN TAMIL NADU.

The following schemes are in operation for the development of coconut in this State :—

(i) *Establishment of Coconut Nurseries.*—This scheme was started in 1961-62 with the object of producing and distributing quality coconut seedlings. There are at present 24 nurseries functioning in this State, with a production capacity of 11.50 lakh seedlings per year. Seedlings are being supplied at the rate of Rs. 2.50 per seedling.

(ii) *Scheme for the production and distribution of Tall x Dwarf Coconut Seedlings.*—The production of Tall x Dwarf hybrid coconut seedlings is being undertaken at the Regional Coconut Research Station, Veppankulam, Thanjavur at the rate of 5,000 seedlings every year. A centrally-sponsored scheme for the production of 25,000 numbers of Tall x Dwarf hybrid seedlings each year has been sanctioned for implementation from 1974-75 in this State. The present scheme undertaken at the Regional Coconut Research Station, Veppankulam, Thanjavur for the production of 5,000 numbers has been merged with this scheme.

The cost of Tall x Dwarf hybrid coconut seedlings has been revised to Rs. 3.50 each from April 1974 and increased to Rs. 4 since January 1975.

(iii) *Scheme for establishment of Elite Coconut Seed Farm.*—

The object of the scheme is to produce high yielding coconut seedlings. The scheme is implemented in the selected lands of the State Seed Farm, Navlock at Ranipet. It is expected that 8.00 lakh seed coconuts would be available annually from 20th year onwards in the Elite Coconut Seed Nut Farm.

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(iv) *Scheme for the laying of pilot Demonstration Plots in Coconut Gardens.*—Under the scheme pilot demonstration plots are laid out in farmers' field to demonstrate the efficacy of the package of practices in stepping up the yield of coconut. The package of practices are continued in the same plot for five years. Subsidies are given for the application of fertilisers and plant protection chemicals. During the Fourth Five-Year Plan, 898 demonstration plots were laid and follow up action on these plots will be taken during the Fifth Plan period. Follow up action is being taken on 808 plots in 1974-75 and during 1975-76 follow up action will be continued in another 600 plots.

(v) *Scheme for setting up Parasite Breeding Stations.*—The main object of the scheme is to multiply parasites on large scale and release them in the pest affected coconut gardens, free of cost, to control the black head caterpillar 'Nephantis serinopa' on coconut. There are 16 parasite breeding stations in this State.

A service charge of Rs. 5 per acre for release of parasites has been levied on the beneficiary coconut growers from November 1974.

CARDAMOM DEVELOPMENT SCHEME.

This scheme was originally sanctioned in March 1969. The object of this scheme is to produce and supply disease free and quality seedlings to the ryots. It has been proposed to cover in a phased manner 250 acres under cardamom during Fifth Plan period with 50 acres in each year from 1974-75.

TURMERIC DEVELOPMENT SCHEME.

This scheme started functioning from 18-4-1970 with an objective of increasing the yield of present crops by improved method of cultivation and arranging credit through co-operative societies.

For the current year it is proposed to cover '6,600 acre' under turmeric with loan assistance through co-operatives to the tune of Rs. 51 lakhs.

CASHEW.

The following two Centrally sponsored schemes comming under the Fifth Five-Year Plan are being implemented from 1974-75 :—

(i) Scheme for improvement of cashew by vegetative propagation.

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(ii) Scheme for laying out demonstration plots on cashew cultivation.

(i) *Scheme for Improvement of Cashew by Vegetative Propagation*.—The object of the scheme is to improve the newly raised cashew plantations by vegetative propagation *in situ* patch budding or veneer grafting or side grafting so as to convert them into trees of merit in respect of yield and quality.

During the Fifth Five-Year Plan, it is programmed by the Government of India to cover a total area of 5,300 hectares at a total cost of Rs. 8.486 lakhs. Government of India have proposed to implement this scheme in an area of 200 hectares during 1974—75, at a cost of Rs. 0.326 lakh. So far only preliminary works such as selection of sites, etc., have been carried out.

(ii) *Laying out Demonstration Plots*.—The scheme is intended to demonstrate the efficacy of adoption of improved farm techniques, viz., manuring and plant protection measures in the same plot, to step up production of cashew. By this means the cultivators are to be apprised that these practices would register increase in the yield of cashew.

During the Fifth Plan period it is programmed by Government of India to lay a total number of 8,000 demonstration plots at a total cost of Rs. 27.49 lakhs.

The Government of India have fixed a target of 300 numbers of demonstrations during 1974—75 at a total cost of Rs. 1.67 lakhs. During 1975—76 it is proposed to lay out 1,400 demonstration plots at a cost of Rs. 4.68 lakhs. So far only preliminary works has been carried out.

TOBACCO DEVELOPMENT SCHEME.

To improve the quality and to increase the production of tobacco, the following schemes are under implementation in Tamil Nadu.

(i) *Comprehensive Scheme for Tobacco Development in Tamil Nadu*. The scheme has the objective to improve the present yield level and quality of chewing and cheroot tobacco by propaganda and demonstration of improved agricultural practices from nursery to harvest and helping in curing and marketing as well. A subsidy of Rs. 50.00 per plot is extended for composite demonstration plots. Distribution of improved tobacco seeds to the farmers and guiding them to take up timely and scheduled applications of fertilisers and plant protection measures are also attended to.

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(ii) *Centrally-sponsored Scheme for Flue Cured Virginia Tobacco Development in Tamil Nadu.*—The object of the scheme is to extend the cultivation of flue cured virginia tobacco in Tamil Nadu and to improve the quality and production of cigarette tobacco in Tamil Nadu. The scheme is being implemented in parts of Dharmapuri district. The subsidy is made available for construction of bore-wells, curing, laying, demonstration plots, etc.

HORTICULTURE.

Model Orchard-cum-Nurseries.

With the objective to cater to the needs of the fruit growers and the general public in respect of their requirements of quality and pedigree planting materials of horticultural crops and to establish visual demonstration centres for scientific cultivation, nine orchard-cum-nurseries are functioning in this State in the places mentioned below :—

Attur	..	..	..	..	Chingleput district
Kudapattu	..	..	..	..	North Arcot district
Marungulam	..	..	..	..	Thanjavur district
Kodaikanal	..	..	..	..	Madurai district
Poovanni	..	..	..	..	Ramanathanapuram district
Courtallam	..	..	..	..	Tirunelveli district
Periakulam	..	..	..	..	Madurai district
Thimmapuram	..	..	..	..	Dharmapuri district
Coonoor	..	..	..	..	The Nilgiris district

One more Orchard-cum-Nursery will be established in South Arcot district during 1975—76.

Apart from model orchard-cum-nurseries, a scheme for the production and expansion of area under 'Kew' variety of pineapple in the districts of Madurai, Kanyakumari and Tirunelveli and another scheme for the cultivation of pineapple in North Arcot district are under implementation from the year 1974—75. A Tropical Fruit Research Institute

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has been established at Anna Pannai, Kudumiyamalai, Pudukkottai district during the year 1974—75 and it is undertaking intensive researches on various tropical fruits in Tamil Nadu.

Scheme for Development of Horticulture in Hill Areas.—The scheme for the development of horticulture in hill areas envisages development of horticulture in the districts of North Arcot, Salem, Tiruchirappalli and Madurai to promote the well being of residents of the hill areas and to ameliorate the condition of the tribal people. Under the scheme, 50 per cent subsidy is allowed on all inputs supplied to the horticulturists.

Indo-German Nilgiris Development Project, Ootacamund.

The Indo-German Nilgiris Development Project was inaugurated in January 1967 with the main objective of achieving a rapid rise in the level of agricultural production in the Nilgiris district.

The main features of the programmes are :—

- (a) The introduction of high yielding varieties of potato, vegetables, cereals, fodder, etc.
- (b) To induce the adoption of package of improved practices by farmers for individual crops through intensive propaganda efforts.
- (c) The adoption of suitable rotation to diversify the cropping pattern, mainly to break the practice of monocropping with potato.
- (d) Timely supply of agricultural production aids and credit to farmers.
- (e) Gearing up the extension machinery for the rapid adoption of improved practices.
- (f) Strengthening and supporting the marketing facilities to enable the farmers to obtain fair prices.

Activities and achievements of the Project.—(1) Rehabilitation and re-organisation of 8 State Seed Farms with a total area of about 100 hectares were carried out.

(2) By conducting a large number of experiments, the Project collected the basic data for the formulation of package of improved practices on cultivation of potato, vegetables, cereals and fodder crops.

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(3) Out of 121 potato varieties tested (last year 131 varieties were tested) four high yielding and late blight resistant varieties were selected and multiplied. (The reduction in number this year is due to the rejection of certain varieties.)

(4) Multiplication of virus free potato seeds partly in farmers' fields and the distribution of improved seeds have been organised.

(5) A programme for the control of the potato Golden Nematode was worked out and taken up for implementation. Due to the treatment of Dasanit 10 per cent granules, the yield in the irrigated area in Ootacamund increased by more than 100 per cent. The field application programme commenced during 1970-71 is being continued for 1975-76. About 4,910 acres have been brought under this programme in the district benefiting 948 farmers.

(6) Fifteen high yielding varieties of vegetables were selected after being found superior to the local varieties. Large quantities of seeds of these vegetable varieties were imported and distributed to the farmers. Many varieties of cabbage and carrot were imported as early as 1970 for trial purposes to suit the climatic conditions of the Nilgiris district. Among those varieties a cabbage variety called "September" and carrot variety "Zino" were found to be superior in yield and valued much in the market. Hence from 1971 onwards, the seeds of these varieties were imported every year from West Germany for distribution to ryots in the Nilgiris district.

(7) A marketing survey for vegetable and cut flowers in five cities was entrusted to and conducted by a private Marketing Survey Institute to get detailed information about an opening for the sale of the Nilgiris Hill vegetables and cut flowers.

(8) Two promising shawberry varieties were identified as suitable for extension in the Nilgiris and distribution of large numbers of slips was taken up.

(9) Cultivation of barely for malting purposes has been recommended and taken up in farmers' fields as a crash programme.

(10) New fodder crops have been introduced.

(11) High Yielding Varieties of paddy, ginger and tapioca have been introduced in Gudalur taluk. Intensive extension work is being done in this area.

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(12) A Small Farmers Loan Scheme was established to supply small farmers of the district with credit for production purposes.

(13) A full fledged Soil Testing Laboratory was established in Ooty. Soil samples collection from individual holdings was taken up to prepare a soil fertility map for the district.

(14) Tractors and heavy earth moving equipments are hired out for ploughing, terracing slopes and building country roads.

(15) An Agency styled as "Indo-German Nilgiris Development Agency, Ootacamund" has been registered under the provisions of the Societies Registration Act, 1860 (Central Act XXI of 1860) with the purpose of diffusion of useful knowledge for agricultural development of the Nilgiris district and for the utilisation of the Counterpart funds generated from the sale proceeds of the articles supplied by the Government of Federal Republic of Germany for use under the Indo-German Nilgiris Development Project, Ootacamund. Several schemes for development of the Nilgiris District will be considered by this Agency for release of funds.

(16) An Association called "The Nilgiris District Vegetable Growers Association" has also been registered under the Societies Registration Act, 1860 to procure and market the hill vegetables produced by the farmers of the Nilgiris District.

CENTRALLY SPONSORED SCHEME FOR THE DEVELOPMENT OF FRUIT PRODUCTION (BANANA) FOR EXPORT PURPOSES.

The Centrally Sponsored Scheme for increasing the production of the exportable variety of bananas is being implemented in Chingleput and Tirunelveli districts. During the year 1974-75, 1,000 hectares will be covered under exportable varieties of bananas. Under this scheme 85 demonstration plots will be laid on an area of one acre each with a subsidy of Rs. 1,350 per plot.

AGRICULTURAL MARKETING.

Two laboratories for grading of agricultural produce under Agmark specifications have been opened during 1974-75 at Palladam and Nagercoil making a total of 13 laboratories functioning in the State. These laboratories help to maintain quality control work.

A training centre to impart training in grading work to the graders employed at the commercial grading centres has been established at Madras during the year. The training is given for a period of three months for 15 Agricultural Assistants working as Graders in each batch.

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One Kapas Grading Centre has been opened at Sankarankoil during 1974-75 making a total of six centres functioning at all important cotton growing tracts in the State. It is proposed to open two more centres, one centre in the rainfed tract of Coimbatore District at Udumalpet and another in the rainfed tract of Tirunelveli at Koilpatti under the Intensive Cotton Development Programme.

There are 11 Market Committees functioning in the State, at the rate of one for each district except the Nilgiris, Salem, Pudukkottai and Madras. Two more regulated markets have been established during the current year making a total of 125 regulated markets functioning in the State.

During the year, the proposal for the development of regulated markets with finance from Agricultural Refinance Corporation, through State Land Development Bank and Commercial Banks is under consideration.

INTEGRATED DRYLAND AGRICULTURAL DEVELOPMENT PROGRAMME

The Centrally Sponsored Scheme of Integrated Dryland Agricultural Development sanctioned for implementation in Tamil Nadu at Koilpatti and Pudukkottai during Fourth Five-Year Plan will be continued during Fifth Five-Year Plan with the object of increasing the per acre yield of dryland and raising the annual income of dryland and ultimately to raise economic and social levels of the dryland farmers.

The following tables show the area coverage at the end of Fourth Plan (1973-74) and the additional food production over the base year 1970-71.

Area Coverage (1970-71) to (1973-74).

Project.				Target.	Achievement.
(1)				(2)	(3)
				ACS.	ACS.
Koilpatti	..	..	..	8,000	8,546
Pudukkottai	..	..	..	6,000	6,038
Total	..	..	..	14,000	14,584

Additional food production over base year 1970-71; 440 M.T.

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An amount of Rs. 7.52 lakhs had been utilised for land development schemes like land levelling, counter bunding, desilting tanks, etc. The value of benefit derived was Rs. 11.29 lakhs. By digging of new wells, deepening of old wells, distribution of pumpsets an additional yield of 80 tonnes was recorded. Distribution of milch cattle, poultry and sheep and piggery recorded an yield of 2.00 lakh litres of milk and 2.10 lakhs of eggs.

During 1974-75, 4,000 acres of additional area will be brought under the scheme. During 1975-76 an additional area of 4,000 acres will be covered. The Government of India have sanctioned an expenditure of Rs. 6.645 lakhs (Rupees six lakhs sixty-four thousands and five hundred only) as grant for the Koilpatti project and Rs. 5.510 lakhs (Rupees five lakhs fifty-one thousand only) for the Pudukottai project. In addition a sum of Rs. 0.220 lakh (Rupees twenty-two thousand only) for Koilpatti and Rs. 0.175 lakhs (Rupees seventeen thousand five hundred only) for Pudukottai project is to be incurred as Risk Fund. Under the Koilpatti project an amount of Rs. 2.529 lakhs has been utilised as loan and Rs. 3.381 lakhs as grant up to the end of January 1975. As regards Pudukottai project the expenditure incurred under loan up to the end of January 1975 is Rs. 5.058 lakhs and Rs. 3.879 lakhs under grant.

AGRICULTURAL REFINANCE CORPORATION

In 1975-76 the following schemes as approved by Agricultural Refinance Corporation will be implemented—

1. Tea scheme in Nilgiris district to cover 1,000 acres with a financial outlay of Rs. 25 lakhs. The physical target has been achieved. The maintenance work will continue during 1975-76.
2. Rubbers scheme in Kanyakumari district to cover 1,543 acres with a financial outlay of Rs. 24 lakhs:—The physical target has been exceeded. The balance loan is Rs. 4.22 lakhs which will be utilised for maintenance purpose.
3. Three coconut schemes in Thanjavur, Madurai and Kanyakumari districts to cover 2,000 acres. 5,000 acres and 3,500 acres with a financial outlay of Rs. 30.37 lakhs Rs. 137 lakhs and Rs. 122.50 lakhs respectively:—The physical target of the coconut scheme in Thanjavur has been exceeded leaving a balance loan amount of Rs. 6.00 lakhs yet to be disbursed. This amount will be utilised for maintenance purpose. In Kanyakumari and Madurai an area of 1,200 acres will be brought under coconut cultivation at an outlay of Rs. 20.65 lakhs and an area of 800 acres of lands will be covered with an outlay of Rs. 8.34 lakhs respectively during 1975-76.

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4. Three coffee schemes in Madurai, Salem (I Phase) and Salem (II Phase) to cover 3,276 acres, 810 acres and 250 acres with a financial outlay of Rs. 59.80 lakhs, Rs. 13.10 lakhs and Rs. 7.50 lakhs respectively:— The physical programmes of Madurai and Salem schemes have been achieved and the balance of loan amount will be utilised for maintenance purposes. Under the Salem Scheme (II Phase) an area of 180 acres will be covered by coffee with an outlay of Rs. 2.72 lakhs during 1975-76.

5. Cocoa scheme in Kanyakumari district to cover 750 acres at a cost of Rs. 7.50 lakhs. Under this scheme an area of 400 acres will be covered with cocoa at an estimated cost of Rs. 3.275 lakhs during 1975-76.

6. A grapevine scheme in Madurai district to cover 1,000 acres at a cost of Rs. 100 lakhs. An area of 350 acres will be brought under grapevine at a cost of Rs. 31 lakhs.

2. The following schemes are under various stages of consideration :—

<i>Name of the Scheme.</i>	<i>Physical and Financial Targets.</i>	
	<i>Acres.</i>	<i>Rs. in lakhs.</i>
(1)	(2)	(3)
1. Cashew Development Scheme in Tiruchirappalli.	5,000	20.00
2. Cashew Development Scheme in Ramanathapuram.	15,000	60.00
3. Cashew Development Scheme in South Arcot.	10,000	40.00
4. Coconut Scheme in Tenkasi Taluk of Tirunelveli district.	1,500	37.50
5. Coconut Scheme in Chingleput	1,500	60.00
6. Coconut Scheme in Udumalpet taluk of Coimbatore district	1,500	30.00
7. Coconut Scheme in Pollachi taluk of Coimbatore district ..	2,200	44.00
8. Coconut Scheme in Salem	1,500	45.00
9. Coconut Scheme in Thanjavur	1,200	32.40
10. Coconut Scheme in Pudukottai	1,000	30.00
11. Coconut Scheme in Ramanathapuram ..	3,000	90.00
12. Coconut Scheme in Tiruchirappalli	2,500	100.00
13. Geranium in Nilgiris	2,000	60.00

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Name of the Scheme.

Physical and
Financial
Targets.

Acres. Rs.
in lakhs.

(1)

(2)

(3)

14. Geranium in Madurai	1,500	50-00
15. Coffee in Nilgiris District	2,500	75-00
16. Banana in Madurai	4,000	120-00
17. Orchard Development in Madurai	1,500	27-30
18. Jasmine Cultivation in Madurai district	400	26-40
19. Additional Coffee Scheme in Palani hills in Madurai district.	3,000	84-00
20. Coconut Plantation in Tiruchendur taluk	500	15-00
21. Coconut Plantation in Dharmapuram taluk	2,000	80-00
22. Dry farm Cultivation in Madurai	10,000	30-00
23. Coconut Scheme in Merkanam taluk	1,000	30-00
24. Coconut Scheme in North Arcot district	1,500	60-00
25. Coconut Scheme in Avinashi taluk	1,200	42-00
26. Coconut Scheme in Coimbatore taluk	1,000	40-00
27. Grape Scheme in North Arcot district	250	25-00
28. Coconut Scheme in Bargur Firka	1,500	60-00
29. Pepper Scheme in Gudalur taluk	500	10-00
30. Cloves Scheme in Gudalur taluk	300	24-00
31. Dry Farm Cultivation in Tiruttani taluk	3,000	16-65
32. Mango Groves Scheme in Madurai (S.F.D.A.).	500	6-60
33. Rejuvenation of old coconut Plantation in Thanjavur district.	5,000 (Hectares)	222-50
34. Cocoa Scheme in Palani hills	300	9-60
35. Mango orchard in North Arcot district	2,200	25-30
36. Orange Scheme in Kukkalvalley in Nilgiris district.	500	8-00
37. Land reclamation Scheme in Ariyalur and Udayarpalayam taluks. ..	1,000	7-00
38. Land Reclamation Scheme in Perambalur taluk.	1,000	7-40

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INTERNATIONAL DEVELOPMENT ASSOCIATION PROGRAMME.

Land Reclamation.—Under International Development Association Project, the reclamation of 11,000 acres with an outlay of Rs. 63.11 lakhs under the second phase of the Parambikulam-Aliyar Project Scheme in Coimbatore district has been completed.

Distribution of Tractors.—It is proposed to purchase through International Development Association 1,500 tractors and initial spare parts to the value of 5,000,000 dollars, equivalent to Indian currency of Rs. 3,75,00,000. Tenders have been floated and they are being finalised. These tractors will be distributed to farmers with the loan assistance from Agricultural Refinance Corporation and Primary Land Development Banks.

Procurement of Well Drilling Equipment.—Tender papers for procurement of part of the Well Drilling Equipment have been approved by International Development Association and the remaining tenders will be finalised shortly. Orders are being placed for supply of percussion drills, drilling jars and drilling bits. The total cost involved is Rs. 159 lakhs.

Procurement of Earth Moving Machinery.—Tender papers for procurement of Earth Moving Machinery were opened on 20th January 1975 and they are being processed. Under this programme Crawler Tractors at a cost of Rs. 57 lakhs are proposed to be procured.

INTERNATIONAL DEVELOPMENT ASSOCIATION MINOR IRRIGATION PROGRAMME.

Under International Development Association Project, the Director of Agriculture is carrying out Minor Irrigation Programme i.e., filter point wells and tube-wells in the districts of Tiruchirappalli, Thanjavur and South Arcot. Under the scheme, applications are collected from the farmers and processed by Tamil Nadu Co-operative State Land Development Bank, Limited. After processing, the applications are sent to the Department by the Primary Land Development Banks for sinking filter point tube-wells, shallow tube-wells and medium tube-wells. Loans to beneficiaries are paid by Primary Land Development Banks and the recovery is watched by them. The Department is sinking tube-wells with the machineries and men available in the Department. Cost of pipes supplied and the hire charges for the drilling machines used to sink tube wells are recovered from the concerned Land Development Banks through cost memos. Government have also sanctioned a sum of

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Rs. 89.75 lakhs towards purchase of pipes, pebbles and slotting charges. So for 56.43 lakhs has been spent up to 30th November 1974 out of the sanctioned amount of Rs. 89.75 lakhs.

The Department has executed the following programme under the International Development Association Project from the inception of the scheme up to 31st January 1975:—

<i>District.</i>	<i>Filter points.</i>	<i>Shallow tube-wells.</i>	<i>Medium tube-wells.</i>
(1)	(2)	(3)	(4)
1 Thanjavur	3,259	588	79
2 Tiruchirappalli	...	61	79
3 South Arcot	...	426	261

FARMERS' SERVICE SOCIETIES.

The Government of India, in the light of the recommendations of the National Commission on Agriculture, suggested to the State Government the setting up of "Farmers' Service Societies" on a selective basis with adequate share capital contribution available from the Long Term Operations Fund of the Reserve Bank of India. Accordingly, this Government have set up three Farmers' Service Societies in the Small Farmers' Development Agency districts of Madurai, South Arcot and Tirunelveli. Recently, this Government have issued orders approving the by-laws of the Tamil Nadu Farmer's Service Co-operative Federation Limited to be set up at the State Level. The Government have also decided that the Farmers' Service Societies should be formed in all districts except in Madras and that they will concentrate on manufacture of fertiliser (AMMONIATED COMPOST) and pesticides urgently needed by the farmers.

STATE AGRICULTURAL TRAINING INSTITUTE AT ANNA PANNAI KUDUMIAMALAI, PUDUKOTTAI DISTRICT.

For equipping the technical personnel of the Agriculture Department at different levels with the latest developments in different fields of agriculture, the Government have ordered on 30th January 1975, the establishment of a State Agricultural Training Institute at Anna

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Pannai, in Kudumiamalai, Pudukottai district, under the high yielding varieties programme during 1974-75. In this Institute the following types of training are given :—

(1) Introduction training (of two weeks duration) to new entrants to any position from the cadre of Deputy Agricultural Officers to the cadre of Joint Directors of Agriculture within two months of their recruitment of promotion.

(2) Special course (of six months duration) for senior Field Assistants before they are promoted to the cadre of Deputy Agricultural Officers.

(3) Subject Matter Refresher Training (of 15 days duration) to officers from the cadre of Deputy Agricultural Officers to the cadre of Joint Directors of Agriculture.

(4) Specialised training courses and seminars for District Agricultural Officers, Deputy Directors of Agriculture and Joint Directors of Agriculture.

FARMERS' TRAINING CENTRES.

There are seven Farmers' Training Centres, five under the control of the Department of Agriculture and two under the control of the Agricultural University. In the centres, institutional training is given for five days for the following :—

(1) Farmers; and

(2) Convenors of Farmers, discussion groups.

Peripatetic training and demonstrations in the ryots holdings are also held for one day. One-hundred such training-cum-demonstration per year are conducted for each farmers' training district.

The Government of India have since allotted one Farmers' Training Centre during the year 1974-75 and it has been proposed to establish this centre at Kancheepuram.

TAMIL NADU AGRICULTURAL UNIVERSITY.

The Tamil Nadu Agricultural University continued to function in the fields of Agricultural Education, Research and Extension Education to meet the challenges and problems in the field of agriculture. Consequent on the affiliation of the Madras Veterinary College to the

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University, a new Faculty of Veterinary and Animal Sciences has been started with effect from January 1974. The University has now been recognised by the Indian Council of Agricultural Research for financial assistant for its research and developmental work.

Besides the routine academic programmes in the class rooms, laboratories and the fields, selected Under-Graduate students were placed on "Earn while you learn" programme at Coimbatore and Madurai campuses and the students earned a profit of above Rs. 40 to Rs. 57 per month by rearing poultry and growing vegetables. The students of Agricultural College, undertook plant protection campaign to Educate the farmers on plant protection problems around Coimbatore and in the Kodaikanal hills.

Research Projects.—As against about 600 research projects in operation during the past year, during the current year there are over 900 projects covering different branches of Agriculture, Horticulture, Animal Husbandry, Agricultural Engineering, Fisheries, Food Technology, Basic Science and humanities. The Indian Council of Agricultural Research supports 44 research schemes operating in 20 different centres spread all over the State, in which over 300 technical personnel are employed. Thus a strong research base has been established in the University.

Several new crop varieties have been released by the University during the past year. Chief among them in the hybrid cotton variety CBS. 156 with certain outstanding qualities, for superior to any other cotton variety evolved so far in any part of the country. About 880 kilogram of this hybrid seed was produced during summer months and distributed to the farmers during August-September this year. A new variety of paddy strain 6543, with a duration of 90 days has also been evolved. Co. 2 tomato, a semi-dwarf, erect type, yielding about 40 tonnes of fruits in 145 days and with high ascorbic acid content, has been spreading very fast among the farmers. Co. 2 pumpkin, a variety with a small family size fruit and high yield potential of 23 tonnes ha. has become popular with the farmers. 'Solo' papaya selection from an introduced variety, with bi-sexual characters and small fruits, is becoming popular among the farmers. Co. 38 a long duration (Paddy) variety to replace Co. 25 in Thanjavur delta and Co. 39, a 90 day duration variety to fit into any cropping pattern in the State have been evolved recently.

Bhavani rice variety released two years ago has covered approximately 2 lakh hectares. Co. 36 Paddy was covered an area of about 60,000 acres. Co. 37 releases in January 1974 has covered about 10,000 acres. Sorghum variety 771 and hybrids CoH 1 and CoH. 2 have covered approximately 60,000 acres. These improved varieties have helped the farmers to substantially increase their economic returns. In future

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all releases of new varieties will be made by the Varieties Release Committee of the State, in which the University is represented. It is hoped that the Committee will concentrate on the release of short duration High Yielding Varieties urgently required by the farmers in the various districts of the State.

The shortage of fertiliser supply and its high cost have brought to prominence the use of bacterial fertilisers. The University has been able to supply 'rhizobial culture' for pulse crops covering approximately 25,000 ha. and thus helping to fix about Rs. 70.00 lakhs worth of atmospheric nitrogen in the soil. Requests for the bacterial cultures have been received not only from Tamil Nadu but also from Andhra Pradesh, Karnataka, Pondicherry and Manipur. Pre-treatment of paddy seeds with some strains of *Azotobacter* followed by dipping the roots of the seedlings in a suspension of the bacterium before transplanting, has been found to induce better seed germination and crop stand which would help a saving about 20 kilogramme of N per hectare. By spending about Rs. 10 on the treatment with bacterial culture for one hectare, one could save Rs. 100 on the chemical fertiliser.

Research works carried out in the Agricultural Engineering Research Workshop have resulted in designing and fabricating a new groundnut pod opener, a groundnut grader, a seed cleaner-cum-grader and a mini jasmine oil extraction plant.

The Animal Husbandry Department has developed a poultry feed mixture using algae as one of the components and thus bringing down the cost of the feed.

Correspondence Courses :—The Correspondence Courses started by the University are becoming popular and need to the start more courses was voiced by several farmers. Courses on new subjects like banana cultivation, cotton cultivation will have to be run besides repeating courses on earlier subjects like intensive vegetables cultivation, tractor maintenance, seed production.

The total gross budget estimate of the University for 1975-76 is Rs. 316.00 lakhs. Out of this, the schemes sponsored by the Indian Council of Agricultural Research both fully and partly would attract Rs. 35.00 lakhs roundly and from the Government of India Rs. 2.80 lakhs. The income from tuition fees and the farms of Research Stations under the University would yield about Rs. 32.20 lakhs (Rs. 30.00 lakhs under Non-Plan and Rs. 2.20 lakhs under Plan). The University is expected to receive about Rs. 40.00 lakhs during the next year towards various developmental activities from the Indian Council of Agricultural Research.

The University is being asked to develop its own income, on the model of the Pantnagar University in U.P. and concrete proposals are expected

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to be put into operation by the University during 1975-76, so as to reduce the State's budgetary burden in respect of the University as from 1975-76.

The Ford Foundation has agreed to give about Rs. 40.2 lakhs during the Fifth Five-Year Plan for development of rural Social Science in the University for which a sum of Rs. 20.00 lakhs is expected during 1975-76.

The question of obtaining assistance from the World Bank to an extent of Rs. 10.00 crores during the Fifth and Sixth Plan periods, is under consideration.

SMALL FARMERS DEVELOPMENT AGENCY AND MARGINAL FARMERS AND AGRICULTURAL LABOURERS DEVELOPMENT AGENCY PROGRAMME.

The Government of India have introduced in the Fourth Five-Year Plan a project for the benefit of small farmers and marginal farmers and agricultural labourers in selected blocks in the following five districts under the supervision of an agency in each district, registered under Societies Registration Act, with the District Collector as its Chairman:

Small Farmers Development Agency.	(i) Madurai district. (18 Blocks).
	(ii) South Arcot district (19 Blocks).
	(iii) Tirunelveli district (15 Blocks).
Marginal Farmers and Agricultural Labourers Development Agency.	(iv) North Arcot district (3 Blocks).
	(v) Salem district (5 Blocks).

The scheme is financed from two sources, namely, grants from the Government of India and loans from the co-operative institutions. The grant allotted by the Government of India for each Small Farmers Development Agency is Rs. 1.60 crores and for each Marginal Farmers and Agricultural Labourers Agencies Rs. 1 crore. Duration of each project is five years.

Each Small Farmers Development Agency is to benefit 50,000 small farmers and marginal farmers and each marginal farmers and agricultural labourers agency is to benefit 20,000 small and marginal farmers. Under this scheme, subsidy is given at the rate of 25 per cent to the small farmers and 33-1/3 per cent to the marginal farmers. Credit facilities are being arranged through the co-operative institutions to enable the weaker section of the farming community to undertake better cropping practices to effect permanent improvements through well digging, deepening and energisation of wells and to augment their income by engaging in subsidiary occupations like dairy farming, poultry farming, sheep rearing, etc.

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Total credit facilities short-term, medium-term and long-term loans, availed of by the small farmers and marginal farmers through the co-operatives are as follows :—

Agencies.	Rupees in lakhs (from 1970-71 to 31st October 1974).			
Madurai	..	..	..	209.62
South Arcot	..	..	..	498.37
Tirunelveli	..	..	..	180.61
				888.60
Salem	..	..	..	112.60
North Arcot	..	..	..	49.47
				162.07
Total	..	..	..	1,050.67

Under Minor Irrigation Programme the number of wells sunk, number of old wells deepened and number of pumpsets installed are as follows :—

District.	New wells sunk.	Number of wells deepened.	Pump-sets installed.
(1)	(2)	(3)	(4)
South Arcot	1,021	572	1,138
Madurai	596	280	248
Tirunelveli	968	500	1,034
Salem	13	16	12
North Arcot	55	155	50
	2,653	1,523	2,482

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Under Animal Husbandry Programme the details of achievement are as follows :—

<i>Agency.</i>			<i>Milch animals.</i>	<i>Poultry units.</i>	<i>Sheep units.</i>
(1)			(2)	(3)	(4)
South Arcot	..	..	2,027	93	814
Madurai	..	..	4,404	312	1,031
Tirunelveli	..	..	2,111	540	1,521
Salem	..	..	3,294	1,127	253
North Arcot	..	..	407	27	1,957
			12,243	2,099	5,576

The total expenditure by way of grants, etc., since inception of the projects (1971-72) to 31st January 1975 is Rs. 337.95 lakhs.

Agricultural Department provides staff to the Agency for attending to the agricultural aspects of the programme. The following are the staff in each of the agencies :—

<i>Agency.</i>			<i>Deputy Agricultural Officer.</i>	<i>Demonstration Maistries.</i>	<i>Special Tahsildar.</i>
(1)			(2)	(3)	(4)
South Arcot	..	..	12	120	1
Madurai	..	..	18	180	1
Tirunelveli	..	..	11	110	1
North Arcot	..	..	..	..	1
Salem	..	..	..	..	1

The expenditure towards the above staff is being met from the State Funds.

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The schemes for the development of the small farmers and marginal farmers have been merged and are being extended to the other districts from 1975-76. The following seven districts have been selected for the implementation of the combined schemes :

- (1) Thanjavur.
- (2) Tiruchirappalli.
- (3) Coimbatore.
- (4) Chingleput.
- (5) Pudukottai.
- (6) The Nilgiris.
- (7) Kanyakumari.

Project Cells have been formed for preparing the Project Reports. The reports have been completed and have been approved by the Government of India and are being implemented. Thus the entire State (except Madras, Dharmapuri and Ramanathapuram districts) has been covered by the scheme for Small Farmers and Marginal Farmers.

THE TAMIL NADU AGRO-INDUSTRIES CORPORATION LIMITED.

The Tamil Nadu Agro-Industries Corporation has been functioning from the year 1968 with broad objective of encouraging industries which, in turn, will help the growth and modernisation of agriculture, animal husbandry, pisciculture, Poultry farming and food processing industries.

Financial position.—The authorised share capital of this Corporation is Rs. 4 crores and so far, 3,30,000 equity shares of Rs. 100 each have been issued, subscribed and fully paid up in equal proportion by the Government of India and the Government of Tamil Nadu. The profit earned by the Corporation and the amount of share capital invested for the years from 1970-71 to 1974-75 (up to December 1974) are given below:—

Year.						Share capital.	Net profit before taxes.
						RS.	RS.
1970-71	..	..	..	..	..	2,65,00,000	4,47,000
1971-72	..	..	..	—	..	3,30,00,000	8,28,000
1972-73	..	..	..	..	..	3,30,00,000	11,36,000
1973-74	..	..	..	..	..	3,30,00,000	1,63,600
1974-75 (up to December 1974)	..	..	..	..	..	3,30,00,000	17,36,000

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Activities.—The Corporation was implementing the Hire Purchase Finance Scheme between 1968 and 1970 and a sum of Rs. 312.04 lakhs was advanced to 11,000 parties, for purchase of 10,684 pumpsets and 325 tractors. The distribution of imported tractors has been one of the activities of this Corporation and it has distributed 3,252 tractors.

The Corporation is engaged in the work of mass ground spraying with power tillers, sale of spare parts to the tractors and manufacture of agricultural implements. Besides this, the Corporation is hiring out wheel type tractors and power tillers to agriculturists through its regional centres.

The Corporation is implementing a scheme for training unemployed technical personnel by starting Agro-Service Centres and so far, it has trained 168 entrepreneurs out of whom 128 persons have already started agro-service centres. It is proposed to give training for about 60 persons during 1975-76. It is also engaged in the formulation and supply of pesticides to the Agriculture Department for distribution to farmers. Further it is considering a proposal to set up an industrial complex in the State for the manufacture of pesticide technicals. Also the Corporation has made arrangements to set up a pesticide plant at Ambattur Industrial Estate.

The Corporation has undertaken the supply of fertilisers and marketing of fruit and fruit products and has got proposals for the following projects:—

1. Fishnet making plant.
2. Maize milling complex.
3. Oil complex.
4. Manufacture of blended foods.
5. Extraction of essential oils.
6. Manufacture of tapioca flour and rawa.

AGRICULTURAL DEPOTS.

In order to make available the agricultural inputs within the easy reach of the farmers and to help farmers to get plant protection chemicals quickly to combat pest attack and control plant diseases, 50 additional depots have been opened during 1973-74. The existence of these depots is further justified with the expansion of agricultural activities by introducing and implementing the new schemes like H.Y.V.P, I.A.D.P., etc.

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SCHEME FOR CONDUCTING PHYSICAL VERIFICATION OF STORES AND STOCKS IN THE AGRICULTURAL DEPOTS.

Each depot in the State is stocked with agricultural inputs to the value of several thousands of rupees and the annual transaction in the depots varies from Rs. 10,000 to over one lakh. With a view to safeguarding the interests of Government special staff of 12 Superintendents and 12 Junior Assistants have been employed to physically verify the stores and stocks and to bring to the notice of the authorities concerned the irregularities noticed for taking action.

DROUGHT PRONE AREA PROGRAMME IN RAMANATHAPURAM AND DHARMAPURI DISTRICTS.

The Centrally-sponsored Drought Prone Area Programme, which was implemented in Ramanathapuram and Dharmapuri districts during the Fourth Plan period is being continued in the two districts during the Fifth Plan period also. The Government of India indicated that the Central grant for continuing the programme during the Fifth-Plan period might be Rs. 6 crores for the two districts, but this is subject to the condition that the State Government also provide a matching contribution for taking up similar schemes in the two districts. Pending recasting of the Fifth-Plan Project Reports already prepared for the two districts on the lines suggested by the Government of India, Annual Plans for 1974-75 for the two districts have been prepared and sent to the Government of India. The Annual Plans envisage a total outlay of Rs. 158.78 lakhs for the two districts. The Government of India have agreed that their share of financial assistance for 1974-75 would be Rs. 66 lakhs. The Government of India have so far released a sum of Rs. 5 lakhs and they have been requested to release the balance amount of Rs. 61 lakhs immediately.